REMARKS/ARGUMENTS

Claims 1-11 and 16-20 stand in the present application, claims 19 and 20 having been added. Reconsideration of this case is requested in view of the claim amendments and the following remarks.

In the Office Action, the Examiner has rejected claims 1-4, 7-11 and 18 under 35 U.S.C. § 102(e) as being anticipated by Otsuka et al. and has rejected claims 5, 6, 16 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Otsuka et al. in view of Kleijn et al. Applicants respectfully traverse the Examiner's §§ 102 and 103 rejections of the claims.

As noted previously, Otsuka describes a speech synthesis apparatus in which multiple pitch waveforms are generated and joined together to form a speech waveform. A character series of phonetic text is input and split into frames. A parameter series is generated for each frame. An example of the data structure for one frame of parameters is shown in Figure 8 from which it is clear that a parameter series comprises three separate parameters al of which apply over one whole frame. Pitch waveforms are generated using a synthesis parameter and a pitch scale. Both the synthesis parameter and the pitch scale are parameters in the parameter series and both of them are interpolated during the pitch waveform generation process using a frame time length and a waveform point number. The generated pitch waveforms are then linked and output as synthesized speech. Thus, the cited reference does <u>not</u> "generate a cyclical sound waveform sample" or "a successive cyclical sound waveform sample" as that terminology is defined and used in the present application, including the present claims.

More particularly, at page 7 of the Office Action, the Examiner states that "Otsuka teaches the generation of cyclical sound waveform sample at Fig. 15, element S316, or col. 19 line 4 to col. 20, line 32." The Examiner is clearly in error, however, since element S316 in Figure 15 represents a check that is performed to determine whether or not the process of Figure 15 has been completed for all frames (see Otsuka at col. 20, lines 10-19).

As already mentioned above, in Otsuka et al. a parameter series is generated for each frame and each parameter series comprises three different parameters. From the Examiner's comments on page 3, referring to the cited reference at column 2, it is also clear that when the Examiner refers to a parameter, he is referring to the synthesis parameter p(m).

As noted previously, the word "sample" is defined in Communications Standard Dictionary, 2nd Edition, 1989, Martin H. Weik (ISBN 0-442-20556-2) on page 1005 (and therefore would be understood by a person of ordinary skill in the pertinent art) as "the value of a specific parameter (characteristic), such as the amplitude, frequency, phase or direction of a signal at a chosen instant." The present application states at page 7, lines 9-11 that "each of the records comprises respective waveform recording 11, comprising successive digital values...as successive samples x_1, x_2...x_n."

Thus, it follows that the Examiner is improperly arguing that the "synthesis parameter p(m)" of Otsuka et al. could be interpreted as the "waveform sample" of claim 1. In relation to this interpretation, Applicants note column 2, line 40, of Otsuka et al. where it appears that a "parameter" is associated with an impulse response waveform. In fact, if one considers column 5, lines 26-40, the synthesis parameter p(m) is simply a

multiple of an impulse response h(m). By the definition given above, a waveform sample is the value of a specific parameter of a waveform at a chosen instant. Therefore, a multiple of an impulse response waveform (i.e., synthesis parameter p(m) which comprises not just one but many values and which applies to the entire duration of one frame) cannot be said to be a waveform sample.

Accordingly, Applicants respectfully submit that Otsuka et al. does not teach or suggest any of the steps required by claim 1. Claim 18 recites apparatus features that correspond to the method steps of claim 1 and, hence, claim 18 is believed to patentably define over Otsuka et al. for the same reasons given above with respect to claim 1. Claims 2 to 11 are novel at least by virtue of their dependency on claim 1.

With respect to claims 16 and 17, the Examiner relies on Otsuka at column 4, line 24 to column 5, line 4 for teaching the first element of these claims. However, nowhere in this passage does Otsuka even mention n-dimensional state space representations of voiced speech signals referred to in the claims and also described on pages 4-6 of the present application. It Is clear from the present specification (and it would be clear to someone skilled in the art) that a state space is essentially a graph in which each axis is associated with one dynamic variable. Since Otsuka does not even mention this limitation there would have been no reason for those of ordinary skill in the art to combine the references in the manner suggested by the Examiner. Hence, Applicants respectfully request that the rejection of these claims over the improper combination of references be withdrawn.

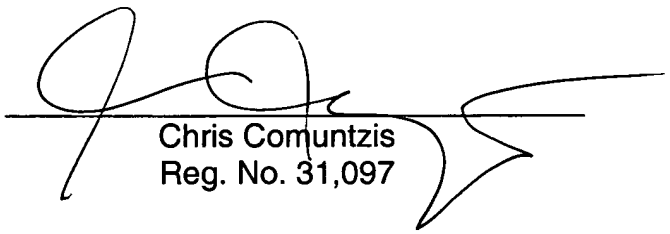
New claims 19 and 20 which define the generated "samples" of "instantaneous values," in accordance with the disclosures throughout the present specification, are

believed to clearly patentably define over the cited art which clearly do not sample any instantaneous values.

Therefore, in view of the above amendments and remarks, it is respectfully requested that the application be reconsidered and that all of claims 1-11 and 16-20, standing in the application, be allowed and that the case be passed to issue. If there are any other issues remaining which the Examiner believes could be resolved through either a supplemental response or an Examiner's amendment, the Examiner is respectfully requested to contact the undersigned at the local telephone exchange indicated below.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 

Chris Comuntzis
Reg. No. 31,097

CC:lmr
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100